

# **ABSTRACT OF THE DISCLOSURE**

A control system for a production process having a plurality of operations. A plurality of time constraints exist between the operations. The control system includes a control module  
5 that defines a plurality of sub-time constraints between each two operations, generates a plurality of equations according to the time constraints and the sub-time constraints, and calculates the sub-time constraints using the equations. The control module then determines whether a status for each  
10 operation defined according to a Work-In-Process (WIP) quantity between a first operation and a checked operation and a throughput rate thereof violates sub-time constraints between the first operation and the checked operation, and releases a  
lot into the production line if the status for each operation  
15 satisfies the corresponding sum of the sub-time constraints.